

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method of attenuating a cancer in a mammal comprising

administering to the mammal a composition comprising an amount of one or more Group B β -hemolytic *Streptococci* ("GBS") toxin receptors having an amino acid sequence of HP59 or SP55 or an amino acid sequence of HP59 or SP55 with at least one conservative amino acid substitution,

wherein the amount is effective to induce or maintain an immune response in the mammal to at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors, and

wherein the cancer is a solid tumor cancer associated with pathological neovasculature.

2-3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 2.

5. (Previously Presented) The method of Claim 1, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 2 with at least one conservative amino acid substitution.

6-7. (Cancelled)

8. (Previously Presented) The method of claim 1, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 4.

9. (Previously Presented) The method of claim 8, wherein at least one other of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 2.

10. (Previously Presented) The method of claim 1, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 4 with at least one conservative amino acid substitution.

11-14. (Cancelled) .

15. (Previously Presented) The method of claim 1, wherein a normal tissue of the mammal does not contain a Group B β -hemolytic *Streptococci* toxin receptor.

16. (Previously Presented) The method of claim 1, wherein the composition is administered via a method selected from the group consisting of oral ingestion, nasal inhalation, subcutaneous injection, intravenous injection, intramuscular injection, intraperitoneal injection and rectal injection.

17-30. (Canceled)

31. (Previously Presented) The composition of Claim 35, further comprising a pharmaceutically acceptable excipient.

32. (Cancelled)

33. (Previously Presented) The composition of claim 35, further comprising an adjuvant.

34. (Previously Presented) The composition of claim 33, wherein the adjuvant is selected from the group consisting of a water in oil composition, Freund's adjuvant, QS21, IL-12 and interferon gamma.

35. (Previously Presented) A composition comprising an amount of one or more Group B β -hemolytic *Streptococci* toxin receptors having an amino acid sequence

of HP59 or SP55 or an amino acid sequence of HP59 or SP55 with at least one conservative amino acid substitution,

wherein the amount is effective to induce or maintain an immune response in the mammal to at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors,

wherein the at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors is conjugated or linked to a protein carrier, and

wherein the cancer is a solid tumor cancer associated with pathological neovasculature.

36. (Original) The composition of claim 35, wherein the protein carrier is a molecule selected from the group consisting of keyhole limpet hemocyanin (KLH), bovine serum albumin (BSA), ovalbumin, human serum albumin, human gamma globulin, chicken immunoglobulin G, bovine gamma globulin and tetanus toxoid.

37. (Previously Presented) The composition of claim 35, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors is glycosylated.

38. (Previously Presented) The composition of claim 35, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors is recombinant or synthetic.

39. (Canceled).

40. (Previously Presented) The composition of claim 35, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 2.

41. (Previously Presented) The composition of claim 35, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 2 with at least one conservative amino acid substitution.

42. (Previously Presented) The composition of claim 40, wherein at least one other of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 4.

43-44. (Cancelled)

45. (Previously Presented) The composition of claim 35, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 4.

46. (Previously Presented) The composition of claim 35, wherein at least one of the one or more Group B β -hemolytic *Streptococci* toxin receptors has an amino acid sequence of SEQ ID NO: 4 with at least one conservative amino acid substitution.

47-58. (Canceled)

59. (Previously Presented) A method of attenuating a cancer in a mammal comprising

administering to the mammal a composition comprising an amount of an immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprising one or more amino acid sequences selected from the group consisting of amino acid residues 49-63 of SEQ ID NO: 2, amino acid residues 112-125 of SEQ ID NO: 2, amino acid residues 8-28 of SEQ ID NO: 2, amino acid residues 49-76 of SEQ ID NO: 2, amino acid residues 14-19 of SEQ ID NO: 4, amino acid residues 75-80 of SEQ ID NO: 4, amino acid residues 25-30 of SEQ ID NO: 4, amino acid residues 9-35 of SEQ ID NO: 4, amino acid residues 8-22 of SEQ ID NO: 4 and amino acid residues 71-84 of SEQ ID NO: 4,

wherein the amount is effective to induce or maintain an immune response in the mammal to a Group B β -hemolytic *Streptococci* toxin receptor, and

wherein the cancer is a solid tumor cancer associated with pathological neovasculature.

60. (Previously Presented) The method of claim 59, wherein a normal tissue of the mammal does not contain the Group B β -hemolytic *Streptococci* toxin receptor.

61. (Previously Presented) The method of claim 59, wherein the composition is administered via a method selected from the group consisting of oral ingestion, nasal inhalation, subcutaneous injection, intravenous injection, intramuscular injection, intraperitoneal injection and rectal injection.

62. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 49-63 of SEQ ID NO: 2.

63. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 112-125 of SEQ ID NO: 2.

64. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 8-28 of SEQ ID NO: 2.

65. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 49-76 of SEQ ID NO: 2.

66. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 14-19 of SEQ ID NO: 4.

67. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 75-80 of SEQ ID NO: 4.

68. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 25-30 of SEQ ID NO: 4.

69. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 9-35 of SEQ ID NO: 4.

70. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 8-22 of SEQ ID NO: 4.

71. (Previously Presented) The method of claim 59, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 71-84 of SEQ ID NO: 4.

72. (Previously Presented) A composition comprising an amount of an immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprising one or more amino acid sequences selected from the group consisting of amino acid residues 49-63 of SEQ ID NO: 2, amino acid residues 112-125 of SEQ ID NO: 2, amino acid residues 8-28 of SEQ ID NO: 2, amino acid residues 49-76 of SEQ ID NO: 2, amino acid residues 14-19 of SEQ ID NO: 4, amino acid residues 75-80 of SEQ ID NO: 4, amino acid residues 25-30 of SEQ ID NO: 4, amino acid residues 9-35 of SEQ ID NO: 4, amino acid residues 8-22 of SEQ ID NO: 4, and amino acid residues 71-84 of SEQ ID NO: 4,

wherein the amount is effective to induce or maintain an immune response in the mammal to a Group B β -hemolytic *Streptococci* toxin receptor,

wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide is conjugated or linked to a protein carrier, and

wherein the cancer is a solid tumor cancer associated with pathological neovasculature.

73. (Previously Presented) The composition of claim 72, further comprising a pharmaceutically acceptable excipient.

74. (Previously Presented) The composition of claim 72, further comprising an adjuvant.

75. (Previously Presented) The composition of claim 72, wherein the adjuvant is selected from the group consisting of a water in oil composition, Freund's adjuvant, QS21, IL-12 and interferon gamma.

76. (Previously Presented) The composition of claim 72, wherein the protein carrier is a molecule selected from the group consisting of keyhole limpet hemocyanin (KLH), bovine serum albumin (BSA), ovalbumin, human serum albumin, human gamma globulin, chicken immunoglobulin G, bovine gamma globulin and tetanus toxoid.

77. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide is glycosylated.

78. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide is recombinant or synthetic.

79. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 49-63 of SEQ ID NO: 2.

80. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 112-125 of SEQ ID NO: 2.

81. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 8-28 of SEQ ID NO: 2.

82. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 49-76 of SEQ ID NO: 2.

83. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 14-19 of SEQ ID NO: 4.

84. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 75-80 of SEQ ID NO: 4.

85. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 25-30 of SEQ ID NO: 4.

86. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 9-35 of SEQ ID NO: 4.

87. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 8-22 of SEQ ID NO: 4.

88. (Previously Presented) The composition of claim 72, wherein the immunogenic Group B β -hemolytic *Streptococci* toxin receptor peptide comprises a sequence consisting of amino acid residues 71-84 of SEQ ID NO: 4.

89. (Previously Presented) The method of Claim 1, wherein the cancer is lung cancer or melanoma.

90. (Previously Presented) The composition of Claim 35, wherein the cancer is lung cancer or melanoma.

91. (Previously Presented) The method of Claim 59, wherein the cancer is lung cancer or melanoma.

92. (Previously Presented) The composition of Claim 72, wherein the cancer is lung cancer or melanoma.

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